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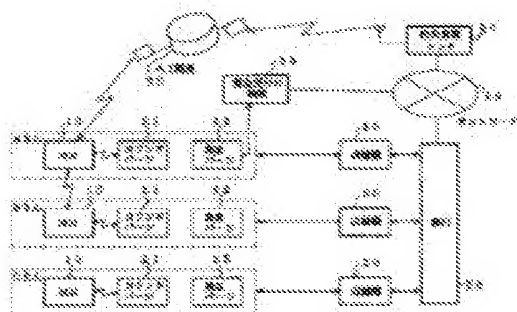
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(57)Abstract:

PROBLEM TO BE SOLVED: To protect an electronic currency transaction from being lost or stolen by letting the owner of an electronic currency transaction machine carry equipment, which mutually exchanges an existence confirm signal with a paired electronic currency transaction machine through fine radio waves and issues an caution in the state of stopping receiving the existence confirm signal from the electronic currency transaction machine, with him.

SOLUTION: An electronic money card 10 performs the key transmission of an existence confirm radio wave in respect to an existence confirm inquiry from counter parts 21 paired with that card itself (1), spontaneously transmits the existence confirm radio wave when the existence confirm inquiry from the counter parts 21 is not dispatched within specified time (2) and spontaneously transmits the existence confirm radio wave when impulse more than a certain

degree is received (3). Besides, in case of (2) and (3), the electronic money card 10 temporarily stops a transaction function so as not to transact with the other electronic money card 10. The electronic money card 10 can transmit or stop an SOS while receiving the transmitting instruction or stopping instruction of the SOS from an artificial satellite 25.



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[Claim(s)]

[Claim 1] It is a loss theft prevention method of electronic money dealings which trade in electronized currency with one pair of electronic money dealings machines which were published from an accounts machine of a financial institution and stored electronized currency, In the state where sent and received an existence acknowledge signal mutually by a feeble radio wave between electronic money dealings machines used as a pair, and an existence acknowledge signal from an electronic money dealings machine is no longer received. A loss theft prevention method of an electronic money dealings machine which makes an electronic money dealings machine owner carry apparatus which emits warning to an owner of the electronic money dealings machine concerned, and is characterized by preventing loss of electronic money dealings, and a theft.

[Claim 2] An electronic money dealings machine which trades in electronized currency with one pair of electronic money dealings machines which were published from an accounts machine of a financial institution and stored electronized currency, comprising:

When transfer directions to other electronic money dealings machines of electronized currency which self holds through a wireless circuit of the 1st carrier frequency from loss theft rescue plane Seki are received, 1st means to transmit data containing electronized currency to hold on a wireless circuit of the 2nd carrier frequency that enciphers as movement data and is different from directions of said move.

Movement data holding mechanism which holds movement data from other electronic money dealings machines when movement data enciphered from other electronic money dealings machines through a wireless circuit of said 2nd carrier frequency is received.

A transfer processing means to transmit via a network movement data held at this movement data holding mechanism to a predetermined financial institution, and to transfer.

A disposal treatment means to suspend transmission of movement data when a transfer directions stop command is received through a wireless circuit of said 1st carrier frequency from said loss theft rescue plane Seki, and to discard electronized currency which self holds.

[Claim 3] The electronic money dealings machine according to claim 2 transmitting after facing transmitting said movement data on a wireless circuit of the 2nd carrier frequency and making self into dealings disabling.

[Claim 4] The electronic money dealings machine according to claim 2 or 3 having further a means by which self is made into dealings disabling with a predetermined time interval, and an input of a password cancels dealings disabling.

[Claim 5] The electronic money dealings machine according to claim 2 or 3 having further a means to change a password when self is made into dealings disabling with a predetermined time interval.

[Detailed Description of the Invention]

[0001] [Field of the Invention] [The technical field which carries out invention]. This invention is the loss theft prevention method and ** of an electronic money dealings machine of an electronic money trading system which trade in electronized currency with one pair of electronic money dealings machines which were published from the accounts machine of the financial institution and stored electronized currency.

The loss theft prevention method and electronic money of an electronic money dealings machine which can collect easily the electronized currency stored by the electronic money dealings machine which is related with ****, and discovered easily the electronic money dealings machine which suited loss and a theft especially, or suited loss and a theft, and other data.

[0002] [Description of the Prior Art]As indicated by the former (Title of invention; the electronic property data transfer method), for example, JP,H8-27815,B, and JP,H7-111723,B (Title of invention; electronic-monetary system), There is technology which enabled dealings of a commercial transaction or money loans among individuals or between an individual and non-individuals, such as a store, with the data carrier (electronic money dealings machine) or dealings module which stored the electronized currency (electronic money) equivalent to currency.

[0003] [Problem to be solved by the invention]However, if it was in the technology indicated by the above-mentioned gazette, there was a problem that consideration was paid to neither loss of an electronic money dealings machine nor recovery of the electronic money dealings machine to a theft or its receiving data.

[0004]Made in order that this invention may solve the above-mentioned problem, the 1st purpose is to provide the loss theft prevention method of the electronic money dealings machine which can prevent loss by mislaying after the fall from the body of an electronic money dealings machine, or use.

[0005]The 2nd purpose is to provide the electronic money dealings machine which can collect easily the electronized currency stored by the electronic money dealings machine or electronic money dealings machine which suited loss and a theft, and other data.

[0006]Whenever the 3rd purpose of this invention goes through a prescribed period so that the safety of an electronic money dealings machine can be improved, it suspends the function of an electronic money dealings machine, It is in providing the electronic money dealings machine of which the stall of an electronic money dealings machine can be canceled by the input of the password changed for between [every] homonymy scheduled time.

[0007] [Means for solving problem]In order to attain the 1st purpose of the above, the loss theft prevention method of the electronic money dealings machine of this invention, In the state where sent and received the existence acknowledge signal mutually by the feeble radio wave between the electronic money dealings machines used as a pair, and the existence acknowledge signal from an electronic money dealings machine is no longer received. An electronic money dealings machine owner is made to carry the apparatus which emits warning to the owner of the electronic money dealings machine concerned, and loss of electronic money dealings and a theft are prevented.

[0008]. In order to attain the 2nd purpose, ** of this invention is provided with the following. When the transfer directions to other electronic money dealings machines of the electronized currency which self holds through the wireless circuit of the 1st carrier frequency from loss theft rescue plane Seki are received, a ***** machine, It is ***** on the wireless circuit of the 2nd carrier frequency that enciphers the data containing the electronized currency to hold as movement data and from which directions of said move differ. Transfer DE which holds the movement data from other electronic money dealings machines when the movement data enciphered from other electronic money dealings machines through the means of 1 and the wireless circuit of said 2nd carrier frequency is received.

Holding mechanism and a transfer processing means to transmit via a network the movement data held at this movement data holding mechanism to a predetermined financial institution, and to transfer, When a transfer directions stop command is received through the wireless circuit of said 1st carrier frequency from said loss theft rescue plane Seki, transmission of movement data is suspended, and the electronized currency which self holds is discarded.

[0009]It faces transmitting movement data on the wireless circuit of the 2nd carrier frequency, and it is made to transmit here after making self into dealings disabling.

[0010]In order to attain the purpose of ***** 3, the electronic money dealings machine of this invention, The password was changed, when self was made into dealings disabling with a predetermined time interval, the input of a password canceled dealings disabling and self was

further made into dealings disabling with a predetermined time interval.

[0011] [Mode for carrying out the invention] Hereafter, an embodiment of the invention is described in detail with reference to Drawings.

[0012] It is enciphered that especially the data transmitted and received between the apparatus in an embodiment of the invention is decipherable only between transceiver subject equipment unless it refuses. Publicly known encoding technology is used for this encryption.

[0013] The electronic money dealings machine (= MM and the following call it an electronic money card) 10, and 11a-11c which drawing 1 is a system configuration figure showing the embodiment of the electronic money trading system which applied this invention, and were published from the accounts machine of the bank A, The electronic money card 12 published from the accounts machine of the bank B exists. The dashed line in drawing 1 specifies a relation with an issuing bank.

[0014] Among these, although the electronic money cards 10 and 12 are independent electronic money cards without child-parent relationship, in the accounts machine of the bank A, as for the electronic money cards 11a-11c, the child-parent relationship of parents, a child, and a grandchild is set up.

[0015] Any electronic money cards 10, 11a-11c, and 12 are constituted so that a cellular phone is possible, Dealings of electronized currency EMs are attained among POS terminals 13 and 14 which can trade in the accounts machine of a bank, other electronic money cards, the electronic money cards of child-parent relationship, or electronized currency EM. It is connected in the network 15, and through this network 15, the banks A and B are constituted so that dealings of inter-bank electronized currency EMs may be possible.

[0016] However, about the electronic money cards 11b and 11c which have parents as their own higher rank machine, dealings are restricted with the attribute set up by parents. The low rank machine cannot delete freely the attribute set up from the higher rank machine. However, the attribute added by itself can be deleted freely. [of the attribute] [an addition and oneself]

[0017] It is enciphered according to the encryption algorithm using the publicly known account technology of a symmetrical key signal book, and electronized currency EM dealt with transfers to business contacts.

[0018] The electronic money cards 10, 11a-11c, and 12 in which these cellular phones are possible are faced being published from the accounts machine of a bank, and identification information (ID) is set [that it is an individual's possession and] up.

[0019] POS terminals 13 and 14 are also published from the accounts machine of the banks A and B, and identification information (ID) is set [that it is a non-individual's possession and] up on the occasion of the issue.

[0020] When trading in electronized currency EM, as the solid line S shows, a session (channel) is established between partner machines. This session (channel) is established by the means using known art, such as direct continuation by a cable etc., light, a feeble radio wave, and inductive coupling.

[0021] In order that the electronic money cards 10, 11a-11c, and 12 may support the dealings based on budget planning, have the currency holder according to budget cost item, but. The communications program with a personal computer is built in so that it can set up arbitrarily with the external personal computers 16, 17, and 18 about the structure of this currency holder. Standard folder structure is prepared, either of these is chosen, and it is corrected and used at the beginning if needed.

[0022] The electronic money cards 10, 11a-11c, and 12, As shown in drawing 2 on behalf of the electronic money card 11a, it has the connection interface 110 with the personal computer 17, the connection interface 111 with other electronic money cards 12, and the connection interface 112 with POS terminal 19, Furthermore, the balance, transaction money amount,

etc. of electronized currency EM in a currency holder. The operation-sides side is equipped with the letter-key part 122 which comprises a key and the cursor control keys 121, such as the display 114 to display, the function key part 115 which pays and comprises the manual operation button of the key 116, the balance introduction key 117, the acceptance key 118, the cancellation key 119, and signature-keys 120 grade, a number, and an alphabetic character.

[0023]The payment key 116 is a key operated when a transaction content with a partner agrees and a partner machine is made to actually transfer electronized currency EM. When trading between POS terminals 19, it can constitute instead of [this] paying and operating the key 116 so that the "disbursement approval key" installed in POS terminal 19 may be operated.

[0024]The balance introduction key 117 is for displaying the balance of electronized currency EM in a currency holder, and whenever it operates this balance introduction key 117, the balance of the following currency holder is displayed.

[0025]The acceptance key 118 is a key operated when accepting electronized currency EM from a partner machine.

[0026]The cancellation key 119 is a key operated when canceling dealings, and if this cancellation key 119 is operated, the session established between partner machines will be cut.

[0027]The signature keys 120 are keys operated when transmitting the signature of the transfer origin of electronized currency EM to a partner machine, and are used at the time of dealings of checks etc.

[0028]Although the connection interface 110,111 with the personal computer 17 and other electronic money cards 12 shows the connected example by a cable and the connection interface 11 with POS terminal 19 shows the example connected by the feeble radio wave in drawing 2. It is not limited to this.

[0029]However, the connection interface 112 with POS terminal 19 has it, when the one connected by the feeble radio wave faces trading in electronized currency EM among many and unspecified customers and advances processing efficiently. [effective]

[0030]If drawing 3 is a functional block diagram showing the internal function of the electronic money cards 10, 11a-11c, and 12 and it divides roughly, The memory 130, CPU135, the clock/timer 136, the input/output interface 137, the keyboard interface 138 with each operation key of operation sides, the display interface 139, the interface 140 with an external personal computer, Transmission and reception with the transmitter-receiver 144 for performing the interface 141 with other electronic money cards, the interface 142 with a POS terminal, and communication with an artificial satellite, the transmitter-receiver 143 for performing transmission and reception with other electronic money cards, and the counter part mentioned later. It has GPS receiver 146 for performing position recognition by the transmitter-receiver 145 for carrying out, and GPS (position recognition system using an artificial satellite).

[0031]And in the memory 130. Electronized currency EM (electronic money). Substitution money to store, such as the safe 1301 and a coupon. The substitution money hangar 1302 and transaction history to store. The transaction log hangar 1303 to store, the money holder 1304 which stores the amount of money of purpose-for-spending purpose-oriented electronized currency EM, the storage area 1305 which stores issuing bank ID, the storage area 1306 which stores self-opportunity ID, the storage area 1307 which stores higher rank machine ID, and low rank machine ID. In order to restrict the purpose for spending of the storage area 1308 to store and electronized currency EM. The attribute of the self-opportunity to be used. The transcriptional region 1313 for sending and receiving the data transmitting between the storage area 1309 to store, a personal computer communication pro's storing region 1310, the

storing region 1311 of the program for dealings machines, and these storing regions 1310 and 1311, the storing region 1312 of a code/decoding program, The data transmitted and received by the transceiver program 1315 with the counter part mentioned later, the communications program 1316 with an artificial satellite, the transceiver programs 1317 between other electronic money cards, and these programs 1315-1316 and 1317. The transmitted-and-received-data holding area 1318 to hold is formed.

[0032]Drawing 4 is an explanatory view showing roughly the processing of the dealings inside of a plane in the case of making payment for a purchasing commodity by electronized currency EM between the electronic money card 11b and POS13, and the flow of electronized currency EM. In drawing 4, the electronic money card is the same as a retail business machine.

[0033]The person having of the electronic money card 11b purchases goods at the store in which POS13 was installed, When it is going to pay by electronized currency EM in the electronic money card 11b and you are going to make it complete dealings, the person having of the electronic money card 11b makes the electronic money card 11b approach the reader of POS13, and establishes the session of the electronic money card 11b and POS13 by a feeble radio wave.

[0034]If commodity attributes read by the bar code reader of POS13, such as the amount billed about a purchasing commodity and a merchandise name, and product class, have been sent from POS13 in this state, The electronic money card 11b investigates whether the money holder according to use item corresponding to product class (purpose-for-spending purpose-oriented) exists, Even if it case or exists, when [not existing] the amount of money for maintenance is less than the amount billed, it judges with dealings being impossible and payment of electronized currency EM is made disapproval (Step 1701).

[0035]However, when the money holder according to use item corresponding to product class (purpose-for-spending purpose-oriented) exists and the amount of money for maintenance exceeds the amount billed next, a use restriction check is performed (Step 1702).

[0036]Prohibition/release of the payment from the accounts machine of the bank set as the storage area 1309 of a self-opportunity attribute in detail, The number of times of an electronic money transfer limit per day, the limit per 1-time dealings, the amount of a trading limit per day, When attribution information, such as information periods (end of the month etc.) to a higher rank machine, low rank machine person having's date of birth, and ID of a report higher rank machine, is taken out, this attribution information and product class, a merchandise name, the amount billed, etc. are compared and it corresponds to a dealings inhibition condition, payment of electronized currency EM is made disapproval (Step 1702).

[0037]The case where it corresponds to a dealings inhibition condition refers to the case where minors try to purchase tobacco, for example, and a message to that effect and applicable merchandise name are displayed on the display 114.

[0038]However, when it does not correspond to a dealings inhibition condition, it pays, the button 116 is operated, the payment of electronized currency EM is permitted on the conditions as which the buyer's purchase volition was determined, electronized currency EM of the amount billed is pulled out from the safe 1301, this is enciphered, and it transmits to POS13.

[0039]POS13 which received electronized currency EM transmits a receipt and its ID to the electronic money card 11b, when the payment of electronized currency EM is received and the issue requesting of a receipt occurs. When the payment of electronized currency EM is received and the message of the purport that a coupon is used is received, the amount of money of a coupon is deducted from the amount billed, and let the remainder be the amount billed. And by this new merchandise purchase, a coupon is published, it transmits to the electronic money card 11b, and a session is cut.

[0040]After session cutting, the electronic money card 11b stores in the storage area 1303 of a transaction log the transaction history containing a receipt, and ends processing of transactions.

[0041]Whether whether a coupon's being used and or not a receipt are required sets up beforehand, before purchasing goods. This is set up by the key operation of the letter-key part 122.

[0042]Drawing 5 is a system configuration figure showing the composition of the principal part of a loss theft preventive function in the electronic money trading system which applied this invention, and drawing 1 and identical parts are expressed with the same sign. In the following composition, it is enciphered that especially the data transmitted and received between apparatus is decipherable only between transceiver subject equipment unless it refuses. Publicly known encoding technology is used for this encryption.

[0043]In drawing 5, 10 is an electronic money card in which electronic money etc. are stored. 21 is a counter part which accomplishes the electronic money card 10 and a couple and prevents the loss theft of the electronic money card 10. 22 is an urgent part of the electronic money card 10, and the telephone number of the receiver's address when the electronic money card 10 carries out a loss theft is memorized.

[0044]An urgent accepting device with which 23 carries out the loss robbery report and electronic money recovery report of the electronic money card 1, The loss theft center in which 24 receives a ***** robbery report and an electronic money recovery report, The artificial satellite with which 25 performs the various directions from the loss theft center 24 to the electronic money card 10 made into the referent, each financial institution where 26 published the electronic money card 10, and 20 are store machines currently installed in a financial institution, a public facility, etc.

[0045]Below, the functional outline of each equipment is explained individually.

[0046](1) The electronic money card 10 electronic money card 10 is provided with the following function for [other than the electronic money transaction function mentioned above] loss theft prevention.

[0047]An existence check electric wave is sent to the existence check inquiry from the counter part 21 which accomplishes the <dispatch of existence check electric wave for loss theft prevention> ** itself, and a pair.

[0048]** If the existence check inquiry from the counter part 21 does not arrive in a prescribed period, an existence check electric wave will be sent spontaneously.

[0049]** If the above shock is got to some extent, an existence check electric wave will be sent spontaneously.

[0050]In the aforementioned ** and **, the electronic money card 10 suspends a dealings function temporarily so that dealings with other electronic money cards 10 cannot be performed.

[0051]Dispatch of SOS at the time of a loss theft and the <stop> electronic money card 10 can send SOS in response to dispatch directions or stop instruction of SOS from the artificial satellite 25, or it can be stopped.

[0052]With other electronic money cards 10, in order to collect electronic money from the electronic money card 10 with a loss theft, in the data of SOS, the electronic money which the electronic money card 10 which sent SOS holds is enciphered, and it exists so that this electronic money (EM) cannot be used.

[0053]A dealings function is suspended so that dealings with other electronic money cards 1 cannot be performed, when SOS is sent.

[0054]When stopping SOS, the held electronic money is discarded.

[0055]The <received of SOS> electronic money card 10 can receive SOS which other electronic money cards 10 sent.

[0056]The electronic money card 10 which received SOS incorporates SOS into the self-electronic money card 10, and tells at a suitable stage "Since SOS is held, a report is required" by vibration / sound / blink to the carrier of the self-electronic money card 1. If this is not sent within a period with the carrier of the electronic money card 10 which received SOS, the electronic money card 10 which received SOS may suspend an own function. Whether it is made to stop or it is not made to stop can set up a financial institution with the owner's degree of bank credit.

[0057]The enciphered photograph of the person himself/herself is stored in the electronic money card 10, and substitution is impossible.

[0058]The output of the electric wave which the <strength of electric wave> electronic money card 10 transmits to the counter part 21 is larger than the existence check inquiry electric wave which the counter part 22 sends.

[0059](2) The counter part 21 <purpose of counter part 21> counter part 21 is for loss early detection of the electronic money card 10, and accomplishes the electronic money card 10 and a couple. The electronic money card 10 detects the regulation distance from the body of a carrier, or that the prescribed period separated, and tells a carrier about it.

[0060]Usually, usual states, such as accessories / wrist watch / glasses / belt buckle, are equipped at the body of a carrier, and the thing to carry.

[0061]Drawing 6 is a functional block diagram showing the composition of the counter part 21, The interface 213 with CPU210, the dealings machine deferred receiving agent 211 with other electronic money cards stored in the memory, the liquid crystal display (LCD) 212, and the buzzer 214, the transmitter-receiver 216 with the electronic money card 10 which accomplishes a pair, an interface with this transmitter-receiver 216, It has the metal fittings 218 for fixing to some of antennas 217, dresses, or personal effects, and the search button 219.

[0062]The <neighborhood existence acknowledgement function> counter part 21 performs the existence check inquiry by an electric wave to the electronic money card 10 corresponding at intervals of a prescribed period. The electronic money card 10 which received the inquiry answers an above-mentioned self-card's existence check. When the response from the electronic money card 10 is not able to be received in a prescribed period, vibration / sound / blink carries out counter part 21 self, and the carrier of the counter part 21 is told about that.

[0063]Also when the existence check which the electronic money card 10 sent spontaneously is received, vibration / sound / blink carries out counter part 21 self, and the carrier of the counter part 21 is told about that.

[0064]The <halt of neighborhood existence acknowledgement function> carrier will be able to stop an existence acknowledgement function temporarily soon. In this case, the counter part 21 connects that to the electronic money card 10 which accomplishes itself and a pair.

[0065]The carrier of the <form> electronic money card 10 is usually carrying the counter part 21 with the electronic money card 10. The counter part 21 is carried by the body so that it may usually be hard to separate from the body. Carrying of the form which the counter part 21 included beforehand in accessories, such as a necklace, a ring, a bracelet, a nose ring, glasses, and a belt buckle, is also considered.

[0066]In this case, a functional rise can be carried out so that the direction/distance data received by the existence check received from the electronic money card 10 may be displayed. The individual which controls vibration / sound / blink by intensity of a reception radio wave is made, so that the electronic money card 10 is approached.

[0067]Since loss of counter part 21 self is also considered, it is desirable to carry two or more pieces to a person every electronic money card 10.

[0068](3) The purpose / urgent part 22 <functional> urgent part 22 is the telephone cards for

reports to the loss theft of the electronic money card 10.

[0069]The telephone number of the loss theft center 24 which are one or more electronic money card ID and receiver's addresses is set up. The loss theft of the electronic money card 10 can be sent to the loss theft center 24 by inserting the urgent part 22 in the urgent accepting device 23 or telephone.

[0070]Since the urgent part 22 is cheap, it is desirable to hold about ten sheets and to make every place dotted with the urgent part 22 of an identical content to all the electronic money cards 10 which the one electronic money card 10 or a family holds.

[0071]By this scattering, even if the electronic money card 10 and the counter part 21 are taken by sneak-thieving / burglar / threat together with this urgent part 22, it can leave somewhere the urgent part 22 which was not taken.

[0072]When the loss theft of the electronic money card 10 is suited, in order to make it sent immediately, walking around with the urgent part 22 is desirable.

[0073](4) The urgent accepting device 23 <purpose> urgent accepting device 23 is equipment for sending the electronic money card 10 which suited the loss theft to the loss theft center 24. It is also equipment for sending SOS which received from the electronic money card 10 which suited the loss theft to the loss theft center 24.

[0074]If the <functional> urgent part 22 is inserted in the urgent accepting device 23, the urgent accepting device 23 will display 1 or two or more electronic money card ID which are registered into the inserted urgent part 22 on the display of the urgent accepting device 23. And electronic money card ID with the selected person who inserted the urgent part 22 is sent to the loss theft center 24 as electronic money card ID of the electronic money card 10 used as a loss theft.

[0075]The <setting position> urgent accepting device 23 is installed in this branch office of a financial institution, a post office, a police station police box, a station, a hospital, a public facility, etc.

[0076](5) The loss theft center 24 <purpose> loss theft center 24 is a control center of the electronic money card 10 which suited the loss theft.

[0077]That is connected to the financial institution 26 which pointed to the <functional> loss theft center 24 to the artificial satellite 25 so that SOS might be made to send from the urgent accepting device 23 to the electronic money card 10 of electronic money card ID with a notification, and published the electronic money card 10 concerned.

[0078]When the electronic money which the electronic money card 10 which suited the loss theft held is collected, that is connected to the financial institution 26 which pointed to the artificial satellite 25 so that the electronic money card 10 might be made to stop dispatch of SOS, and published the electronic money card 10 concerned.

[0079](6) The artificial satellite 25 <purpose> artificial satellite 25 is repeating installation which transmits the directions from the loss theft center 24 to the electronic money card 10.

[0080]The <functional> artificial satellite 25 carries out dispatch of SOS, or directions of a stop to the electronic money card 10 of electronic money card ID directed from the urgent accepting device 23.

[0081]Below, the outline of a loss theft preventive function is explained.

[0082]First, loss theft prevention is explained.

[0083](1) The case 1 <usual> counter part 22 is always performed with the time interval of regulation of an inquiry of the existence check shown in drawing 9 to the electronic money card 10. The electronic money card 10 performs the existence Acknowledgement shown in drawing 10 to the counter part 21 to this inquiry. Therefore, it can check that the partner exists mutually near the self-opportunity in the range which the electric wave which each sends reaches.

[0084](2) While the carrier of the case 2 <case [by fall of the electronic money card 10, the

size of the shock is beyond regulation]> electronic money card 10 walks, the electronic money card 10 is dropped, When the dropping impact which the electronic money card 10 received is beyond regulation, electronic money card 10 self sends spontaneously the data of the existence check spontaneous dispatch shown in drawing 12.

[0085]When this data is received, vibration / sound / blink carries out counter part 21 self, and it warns the electronic money card 10 carrier concerned of the counter part 21. The carrier which is continuing walking without this noticing that it dropped can notice that it dropped the electronic money card 10 immediately, and can escape loss by fall etc.

[0086](3) The case 3< dropping impact is monitoring continuously whether below regulation >** electronic money card 10 self has the existence check inquiry from the counter part 21 in a prescribed period. Therefore, after the existence check inquiry sent from the counter part 21 stopped reaching the electronic money card 10, if it goes through this prescribed period, the data of existence check spontaneous dispatch will be sent from the electronic money card 10. In the radio wave output of the existence check spontaneous dispatch which the electronic money card 10 sends, since the output is larger than the output of the existence check inquiry electric wave from the counter part 21, the counter part 21 will receive the data of existence check spontaneous dispatch in this case. By this reception, vibration / sound / blink carries out counter part 21 self, and it warns the electronic money card 10 of the counter part 21.

[0087]** The counter part 21 is measuring the distance of the counter part 21 and the electronic money card 10 with the intensity (receiving field intensity) of the electric wave of the received existence Acknowledgement. When this measured distance becomes larger than regulation distance, vibration / sound / blink carries out counter part 21 self, and it warns electronic money card 10 carrier of the counter part 21. Vibration / sound / blink is strengthened, so that the counter part 21 displays it based on the direction/distance data sent out from the electronic money card 10 and approaches the electronic money card 10.

[0088](4) Since ** distance <an existence check inquiry reaches the electronic money card 10 although forgotten> is measured, it is the same as the case where it is ** of "a dropping impact is below regulation". [case 4]

[0089](5) the case 5 <although an existence check inquiry does not arrive, the existence check spontaneous dispatch from the electronic money card 10 reaches the counter part 2> -- a case 3< dropping impact is the same as below regulation > in this case.

[0090](6) the case 6 <the existence check spontaneous dispatch from the electronic money card 10 does not reach the counter part 21> -- the carrier of the electronic money card 10 will look for an idea for the counter part 2 to reliance in this case.

[0091] When the counter part 21 receives the existence check spontaneous dispatch which the electronic money card 10 sends by carrying out the depression of the search button 219 of the counter part 21, Vibration / sound / blink can be strengthened, so that the counter part 21 displays it based on the direction/distance data sent out from the electronic money card 10 and approaches the electronic money card 10.

[0092](7) Case 7 <loss> Even if searched, when it is not found or the warning of the counter part 21 is not noticed (i.e., when it loses), it will send to the loss theft center 24 using the urgent part 22.

[0093](8) Case 8 <theft> It is the same as the case 7 "loss" in this case.

[0094]Below, operation of the system about the case of the case 7 "loss" and the case 8 "theft" is explained. Operation of the system in these cases is the same.

[0095]When the loss theft of the electronic money card 10 is suited, the carrier of the electronic money card 10 uses the urgent part 22. 1 or electronic money card ID of two or more electronic money cards 10, the telephone number of the loss theft center 24, etc. are beforehand set to the urgent part 22. This is inserted in the urgent part 22 inserted slot of nearby telephone or the urgent accepting device 23. When the urgent part 22 is inserted in

telephone, the telephone displays 1 or two or more electronic money card ID which are registered into the inserted urgent part 22 on the display of telephone. The person who inserted the urgent part 22 in telephone chooses electronic money card ID of the electronic money card 10 which suited the loss theft from displayed electronic money card ID. Selected electronic money card ID turns into electronic money card ID of the electronic money card 10 with a loss theft, and is sent out automatically to the loss theft center 24.

[0096]The urgent part 22 can also be inserted in the urgent accepting device 23. Operation of the urgent accepting device 23 in this case is the same as operation of telephone.

[0097]When there is only one electronic money card ID registered into the urgent part 22, this electronic money card ID turns into electronic money card ID of the electronic money card 10 with a loss theft.

[0098]The telephone or the urgent accepting device 23 with which the urgent part 22 was inserted transmits electronic money card ID which was carried out in this way and determined to the loss theft center 24.

[0099]The urgent accepting device 23 is installed in this branch office of a financial institution, a post office, a police station, the police box, the station, the hospital, the public facility, etc.

[0100]The loss theft center 24 which received electronic money card ID from the urgent accepting device 23 transmits electronic money card ID to the artificial satellite 25 while registering electronic money card ID which received into a loss theft database.

[0101]The artificial satellite 25 specifies the electronic money card 10 which carries out the carrier of electronic money card ID transmitted from the loss theft center 24, and has electronic money card ID which received as the SOS dispatch electronic money card 10, and broadcasts SOS dispatch directions.

[0102]The electronic money card 10 which received this SOS broadcasting from the artificial satellite 25 disregards this broadcasting, when electronic money card ID broadcast is not electronic money card ID of the self-electronic money card 10.

[0103]However, when electronic money card ID broadcast is electronic money card ID of the self-electronic money card 10 (let this electronic money card 10 be the card S henceforth), the card S performs an own dealings stall. And the balloon of the built-in which has led to the card S with the vinyl tube etc. is emitted outside, and built-in gas is poured in and swollen. By this, if the card S is not caught in something, it will appear all over water sky, and it will broadcast from the air.

[0104]SOS is broadcast, even when the card S is caught in something and cannot float all over water sky. Broadcasting of SOS is performed to the following apparatus.

[0105]a. Electronic money card 10 (henceforth) with electronic money card ID of the card S, and electronic money card ID which has a specific relation it is considered as the card R -- 1 which received SOS from the b. urgent accepting device 23c. loss theft center 24 card S, or two or more above-mentioned apparatus receive SOS broadcast from the card S, and incorporate the SOS into self-apparatus.

[0106]Operation of the electronic money card 10 (card R) which incorporated SOS into below is explained.

[0107]The card R calculates "what day back" from the information period which tells the carrier of the card R about the purport of SOS reception by electronic money card ID of the card R, for example, an SOS receiving day. And if the report date of SOS reception comes, the carrier of the card R will be told about the purport of SOS reception by vibration / sound / blink.

[0108]The carrier of the card R which got to know this by making the urgent accepting device 23 and the card R which are installed in nearby telephone or a financial institution book branch office, a post office, a police station, a police box, a station, a hospital, a public

facility, etc. within the constant period from a report date communicate, SOS which the card R holds is transmitted to the loss theft center 24 by urgent accepting device 23 course.

[0109]The loss theft center 24 gets to know electronic money card ID of the electronic money card 10 (card S) which had the loss theft from SOS collected by the urgent accepting device 23 course, and investigates the solution database which holds whether the incident of this card S is solved in the self-center 24. If it does not register with a solution database as a result of investigation, the contents of registration of a solution database will be erased noting that an incident is solved.

[0110]Next, the loss theft center 24 transmits electronic money card ID of the card S to the artificial satellite 25 so that it may stop broadcasting of SOS of the card S.

[0111]Next, the loss theft center 24 transmits SOS of the card S to the financial institution 26 which published the card S. The financial institution 26 which received transmission of SOS informs that it collected the electronic money of the card S, etc. from electronic money card ID of the card S to the change nominee with the nominee who registered when issue of the card S was received, or a subsequent report. Though natural, when the card S broadcasts SOS to collected SOS, all electronic money of the amount of money and other data that the card S held are contained.

[0112]The artificial satellite 25 broadcasts SOS stop instruction to the card S directed from the loss theft center 24. The apparatus which receives broadcasting of SOS stop instruction and carries out a certain operation is the card S and the card R.

[0113]The card S will stop broadcasting of SOS, if this stop instruction is received, and it separates a balloon. Existence check spontaneous dispatch is performed.

[0114]About the card R, when it is the card R holding SOS in which the card R has electronic money card ID of the card S, SOS with electronic money card ID of the card S is discarded. Therefore, in the card R which received SOS from the card S, also when discarding SOS before a report to the carrier of the self-card R, while the carrier of the card R does not know at all for a certain reason, the card R which he holds may have received and discarded SOS.

[0115]The store machine 20 in which it trades with the electronic money card 10 which an individual holds, When the electronic money card 10 of the individual maintenance which is business contacts is the card R holding SOS data, Even if it is before an SOS maintenance report to the carrier of the card R, the card R has a function which incorporates SOS of two or more cards S currently held from the electronic money card 10, and can transmit incorporated SOS to the loss theft center 24. That is, the store machine 20 also has the vicarious execution function of the urgent accepting device 23.

[0116]The electronic money card 10 which it did [electronic money card] in this way and had SOS incorporated discards all the SOS which self holds.

[0117]Next, the measure about prevention of use of those who are not just carriers of the electronic money card 10 is explained with reference to drawing 7 and drawing 8.

[0118]As shown in <24h effective password> drawing 7, a required number user sets up the password of truth mixing as a password. Here, Pt1-Ptn are true passwords, and Pf1-Pfm are fake passwords.

[0119]The method of password setting out here also needs fake password input intentionally rather than enters only a true password. And a password differs in the true number of passwords and the fake number of passwords to input by the difference in a day of the week, or the difference in a date.

[0120]This method is explained using drawing 7. If a password is not entered before use of the beginning on the day, the electronic money card 10 is in a temporary stall state. First, in the input of a password, all the passwords of truth mixing registered into the electronic money card 10 concerned are displayed on the electronic money card 10 concerned at a built-in display device. The carrier of the electronic money card 10 concerned chooses the

password entered as follows from the password of displayed truth mixing. A question which it tells a password "is next?" in the input by selection of a password whenever the one electronic money card 10 is chosen is still no action, without carrying out. namely, the input of a password is an end now -- or whether a password is entered succeeding entrusts the input person of a password. And if the entered password differs from the password on the day as a result of declaration of the end of password input, a "password error" will only be displayed. When this "password error" reaches the regular number of times continuously, use of regular days is suspended.

[0121]Next, the method of the concrete input of a password is described. When that day is Sunday, a password is entered before use of the beginning of this day, but the number of the passwords of imitations with true as arbitrary passwords with an arbitrary password entered since it is Sunday as one piece is three. This becomes usable [the electronic money card 10 in that day] on Sunday. And this password expects 0:00 a.m. on the next day, and becomes invalid. That is, anew, if the password of two pieces and arbitrary imitations is not entered two pieces, on Monday of the next day, use of the electronic money card 10 becomes impossible [arbitrary true passwords] from 0:00 a.m. on Monday of the next day.

[0122]Also in drawing 8, it is the same. The difference between drawing 7 and drawing 8 is only a difference in whether a password is changed by a day of the week, or it changes by a date.

[0123]Since a possibility of choosing a true password one piece like the input method of other passwords is high even if the person who stole the electronic money card 10 investigates the attribute of a just carrier and guesses a password by this, Use of those who are not just carriers of the electronic money card 10 can be prevented with high probability.

[0124]That the electronic money card 10 which the theft person stole without the input of a password can be used, It is only a case where the stall directions from the artificial satellite 25 to the electronic money card 10 where the electronic money card 10 was stolen with the counter part 21 and which had the theft are not of use for use of the theft person of theft that day. And it is only theft that day.

[0125]The electronic money card 10 can set up the limit of the amount of money which can be used on the 1st as a preset value, and can also increase this temporarily. Even when the operating limit on the 1st is increased, after regular time progress returns to the original preset value.

[0126]Therefore, the damage amount of money by a theft can be further lessened by using two kinds of password methods, the password method for functional activation of the electronic money card 10, and the password method for the operating limit increase on the 1st.

[0127]If the attributes (for example, a birthday, a telephone number, a room number, etc.) of the person himself/herself are included in a password, a password will be able to be presumed by investigating the person of the person himself/herself. Then, by including the attribute of a cardholder's lie intentionally in a password, presumption of a password can become difficult and can raise an unauthorized use preventive effect further.

[0128]Drawing 9 is a data content of the existence check inquiry 40 which transmits to the electronic money card 10 from the counter part 21, asks electronic money card ID41 and consists of the code 42.

[0129]Electronic money card ID41 specifies the counter part 21 of the electronic money card 10 and the electronic money card 10 concerned, and is unique in a system. The inquiry code 42 is a code which shows the existence check inquiry to the electronic money card 10 from the counter part 21.

[0130]The issue financial institution branch code 413 electronic money card ID41 indicates the branch office of the issue financial institution 26 which published the electronic money

card 10 concerned to be, It consists of the issue bank code 412 which shows the issue financial institution 26 where an issue financial institution branch belongs, the country code 411 which shows the country where the issue financial institution 26 belongs, and others 414 which are other data.

[0131]Drawing 10 is a data content of existence Acknowledgement 50 which transmits to the counter part 21 from the electronic money card 10 to the existence check inquiry to the electronic money card 10.

[0132]Electronic money card ID51 is the same ID as electronic money card ID41. The geographic coordinate 52 is geographic coordinate information the electronic money card 10 indicates the current position of the electronic money card 10 received from the GPS system (satellite positioning system by an artificial satellite) to be. The time of origin 53 is time when the electronic money card 10 transmits existence Acknowledgement 50, and the information to a time second and micro second is stored. It is shown that the answering cord 54 is response data from the electronic money card 10 to the existence check inquiry from the counter part 21.

[0133]Drawing 12 is a data content of the existence check spontaneous dispatch 60 which transmits to the counter part 21 from the electronic money card 10, and electronic money card ID61 is the same as that of electronic money card ID41. The geographic coordinate 62 is the information on the same meaning as the geographic coordinate 52. The time of origin 63 is the information on the same meaning as the time of origin 53. The spontaneous calling code 64 shows without the existence check inquiry from the counter part 21 that it is the existence check which transmitted to the target on the other hand from the electronic money card 10.

[0134]Drawing 13 is a data content of the stall 70 which transmits to the electronic money card 10, in order to connect the stop of the existence check inquiry to the electronic money card 10 from the counter part 21. Electronic money card ID71 is the same as that of electronic money card ID41. The stall time 72 shows the time interval which stops an existence check inquiry. The stall code 73 shows a stall.

[0135]Drawing 14 is a figure showing the dealings function of a class division and other opportunities of the stall of the electronic money card 10, and has from the 1st class to the 3rd class as a class of a stall, and the dealings or communication with the urgent accepting device 23 is attained also in which class. However, dealings with the store machine 20 are forbidden in the stall mode of the 1st class. The input of a password is forbidden in the stall mode of the 1st class and the 2nd class.

[0136]If the electronic money card 10 carries out the short-time depression of the power supply ON switch, it will serve as a power turn, if a depression is carried out for a long time, it will be a power turn and dealings or communication only with the urgent accepting device 23 will be attained. Even if it pushes a power supply ON switch into a power turn for a long time, dealings or communication only with the urgent accepting device 23 is attained.

[0137]Drawing 15 is a data content of the SOS dispatch directions 80 which transmit to the artificial satellite 25 from the loss theft center 24. Artificial satellite ID81 is a code which specifies the artificial satellite 25 which receives the SOS dispatch directions 80. The SOS dispatch instruction codes 82 are contents which direct broadcasting of SOS dispatch directions to the electronic money card 10 of electronic money card ID83 which is an instruction content and suited the loss theft to the artificial satellite 25. Electronic money card ID83 is electronic money card ID of the electronic money card 10 which the report was formed as having suited the loss theft and was received.

[0138]Drawing 16 is a data content of the SOS dispatch directions broadcasting 90 which broadcasts SOS dispatch directions from the artificial satellite 25 to the electronic money card 10 of electronic money card ID83 which suited the loss theft. The SOS dispatch instruction code 91 shows that this broadcasting is SOS dispatch directions. It is shown that

electronic money card ID92 is the SOS dispatch directions to the electronic money card 10 with this ID.

[0139]Drawing 17 is a data content of the SOS stop instruction 100 which transmits to the artificial satellite 25 from the loss theft center 24. Artificial satellite ID101 is a code which specifies the artificial satellite 25 which receives the SOS stop instruction 100. The SOS stop instruction code 102 is an instruction content over the artificial satellite 25, and is contents which direct broadcasting of SOS stop instruction to the electronic money card 10 of electronic money card ID103.

[0140]Drawing 18 is a data content of the SOS stop instruction broadcasting 150 which broadcasts SOS stop instruction from the artificial satellite 25 to the electronic money card 10 of electronic money card ID152. The SOS stop instruction code 151 shows that this broadcasting is SOS stop instruction. It is shown that electronic money card ID152 is the SOS stop instruction to ***** 10 with this ID.

[0141]Drawing 19 is a data content of SOS160 which the electronic money card 1 of electronic money card ID92 (= electronic money card ID162) to which SOS dispatch was directed by the SOS dispatch directions broadcasting 90 from the artificial satellite 25 broadcasts. The SOS code 161 shows that this broadcasting is SOS. Electronic money card ID162 is electronic money card ID of the electronic money card 10 which has broadcast SOS. The geographic coordinate 163 is geographic coordinate information the electronic money card 10 concerned indicates the current position of the electronic money card 10 received from the GPS system to be. The time of origin 164 is time when the electronic money card 10 broadcasts SOS, and the information to a time second and micro second is stored. The storing electronic money 165 enciphers the electronic money which the electronic money card 10 concerned stores. In addition, the stored data 166 enciphers stored data other than electronic money 165 which the electronic money card 10 concerned stores.

[0142]Drawing 20 is a data content of the urgent part 22. 171 is data for options. Electronic money card ID172 is electronic money card ID, and can store two or more electronic money card ID. The urgent accepting device telephone number 173 is a telephone number of an urgent accepting device.

[0143]Drawing 11 is a data content of the functional lowest over the electronic money card 10 from the counter part 21, it comprises electronic money card ID181 and the functional resumption code 182, and the stall state up to the 3rd class is canceled of the 1st class according to the contents of the functional resumption code 182.

[0144]Drawing 21 is a flow chart which shows the basic motion in connection with loss theft prevention of the electronic money card 10.

[0145]The electronic money card 10 is provided with the sub power supply used for the purpose of this invention, and the main power supply used for the original purpose of electronic money card 10.

[0146]When a main power supply becomes one, common processing unconditionally shown in the flow chart of drawing 30 is performed (Step 2104). And if a return is carried out from the common processing shown in drawing 30, it will shift to the operation under main power supply one shown in drawing 21.

[0147]When a main power supply turn off operation is performed during main power supply one, after connecting turning OFF a main power supply to the carrier of the electronic money card 10 with a display/sound, a main power supply is turned OFF and it ends (Steps 2101-2103).

[0148]After being in a main power supply ON state, a phenomenon waiting state is canceled. And an OFF division of which phenomenon occurred is performed.

[0149]By this OFF division, the occurring phenomenon of dealings with the ** urgent accepting device 23, the dealings with a machine besides ** / operation of the self-inside of a

plane, ** shock detection, ** self-money card ID reception, money card ID reception besides **, and ** timeout ** becomes clear (Steps 2105-2110).

[0150]And processing corresponding to this occurring phenomenon is performed (Steps 2111-2116).

[0151]Henceforth, it explains individually for every occurring phenomenon of this.

[0152](1) When it is dealings with the urgent accepting device 4, as shown in drawing 22, perform common processing shown in drawing 30, and it becomes an end, i.e., a phenomenon waiting state, (Step 2201).

[0153](2) the case where performed and carried out suboperation shown in drawing 30 (Step 2301), and the return has been carried out from common processing when it is the dealings with other opportunities / operation of the self-inside of a plane -- detail flowchart **** of drawing 23 -- perform dealings of the purposes like (Step 2302). Next, it is confirmed whether a business-contacts machine is the store machine 20 (Step 2303).

[0154]When a business-contacts machine is the store machine 20, all the SOS which will be held if it is confirming whether the self-electronic money card 10 holds SOS (Step 2304) and holds also transmits to the store machine 20 which is a business-contacts machine (Step 2305). Then, SOS currently held is discarded (Step 2306) and it becomes an end, i.e., a phenomenon waiting state.

[0155]When it becomes clear not to hold SOS of the other electronic money cards 1 with the check of Step 2304, it becomes an end, i.e., a phenomenon waiting state, as it is.

[0156]When it becomes clear with the check of Step 2303 that a business-contacts machine is not the store machine 20, it becomes an end, i.e., a phenomenon waiting state, as it is.

[0157](3) When there is a shock beyond shock detection, i.e., regulation, as shown in the detail flowchart of drawing 24, let the dealings function of the self-electronic money card 10 be a 3rd-class dealings stall (Step 2401).

[0158]A 3rd-class dealings stall is in the state of asking for the input of a password in the next user's operation of the self-electronic money card 10.

[0159]Next, the data 50 of the existence check spontaneous dispatch shown in drawing 12 is sent (Step 2402). Then, the timer of T1 is set (Step 2403) and it becomes an end, i.e., a phenomenon waiting state.

[0160](4) When the data in which self-money card ID exists is received, as shown in the detail flowchart of drawing 25, analyze what kind of data received data are. The received data 40 (Step 2501) of an existence check inquiry from the counter part 21 which shows ** drawing 9 received data as a result of this analysis, ** The received data 180 (Step 2503) of the functional resumption connection from the counter part 21 shown in received-data 70(Step 2502)** drawing 21 of the stall connection from the counter part 21 shown in drawing 13, ** It is divided like the received data 90 (Step 2504) of SOS dispatch directions broadcasting from the artificial satellite 25 shown in drawing 16, and the received data 150 (Step 2505) of SOS stop instruction broadcasting from the artificial satellite 25 shown in ** drawing 18.

[0161]Henceforth, it explains individually for every received data of these.

[0162]First, when the existence check inquiry from the counter part 21 shown in drawing 9 is received (Step 2501), the timer of T1 and T2 is reset (Step 2506). And it is confirmed whether the self-electronic money card 10 is [existence check spontaneous / *****] under dispatch (Step 2507). If it is [existence check spontaneous] under dispatch, the existence check spontaneous dispatch 60 shown in drawing 12 will be sent (Step 2508). Then, the timer T1 is set (Step 2509) and it becomes an end, i.e., a phenomenon waiting state.

[0163]If the self-electronic money card 10 is not sending [be / it] existence check spontaneity as a result of the check of Step 2507, the existence Acknowledgement dispatch 50 shown in drawing 10 will be sent (Step 2510). Then, the existence Acknowledgement data

50 shown in drawing 10 is sent (Step 2513). Next, the timer T2 is set (Step 2511) and it becomes an end, i.e., a phenomenon waiting state.

[0164]Next, when the stall data 70 shown in drawing 13 from the counter part 21 is received (Step 2502), let the dealings function of the self-electronic money card 10 be a 3rd-class dealings stall (Step 2512). And the stall time 72 in the stall data 70 made into stall time is set as timer T3 (Step 2514), and it becomes an end, i.e., a phenomenon waiting state.

[0165] Next, when the functional resumption data 180 shown in drawing 11 from the counter part 21 is received, (Step 2503) and timer T3 are reset (Step 2515), and a 3rd-class dealings stall is canceled (Step 2516). Then, the existence Acknowledgement data 50 shown in drawing 10 is sent (Step 2516). Next, the timer T2 is set (Step 2518) and it becomes an end, i.e., a phenomenon waiting state.

[0166]Next, when the SOS dispatch directions broadcasting data 90 from the artificial satellite 25 shown in drawing 16 is received, let the dealings function of (Step 2504) and the self-electronic money card 10 be a 1st-class dealings stall (Step 2519). Next, the balloon built in the self-electronic money card 10 is emitted (Step 2520), and the gas too built in the emitted balloon is poured in (Step 2521). And the meaning of "please send the electronic money card 10 to the arbitrary financial institutions 26" is displayed on the display device of the self-electronic money card 10 (Step 2522).

[0167]Then, the electronic money stored in the self-electronic money card 10 and other data are enciphered with an encryption method different, respectively (Step 2523), and the SOS data 160 shown in drawing 19 is sent (Step 2524). Then, the timer T4 is set (Step 2525) and it becomes an end, i.e., a phenomenon waiting state.

[0168]Next, when the SOS stop instruction broadcasting data 150 from the artificial satellite 25 shown in drawing 18 is received, the electronic money stored in (Step 2505) and the self-electronic money card 10 and other data are discarded (Step 2526). And the dealings function of the self-electronic money card 10 is made into a 1st-class dealings stall (Step 2527), and dispatch of the SOS data 160 is stopped (Step 2528).

[0169]Then, the meaning of "please send the electronic money card 10 to the arbitrary financial institutions 26" is displayed on the display device of the self-electronic money card 10 (Step 2529). And the balloon currently emitted is separated from the self-electronic money card 10 (Step 2530), and the existence check spontaneous outgoing data 60 shown in drawing 12 is sent (Step 2531). Then, the timer T5 is set (Step 2532) and it becomes an end, i.e., a phenomenon waiting state.

[0170]Next, when the data in which other money card ID exists is received, as shown in the detail flowchart of drawing 27, it is analyzed what kind of data the received data are. the SOS data 160 (Step 701) which shows ** drawing 19 received data as a result of this analysis, the SOS stop instruction broadcasting data 150 (Step 702) from the artificial satellite 25 shown in ** drawing 18, and ** -- it is divided like.

[0171]Henceforth, it explains individually for every received data of these.

[0172] First, when the SOS data 160 shown in drawing 19 is received, it confirms whether to already have held (Step 2701) and the SOS data 160 of the electronic money card 10 of the same ID as electronic money card ID162 in received data (Step 2703). If it does not hold as a result of this check, the data of the SOS data 160 is stored in the self-electronic money card 10 as it is just as it is (Step 2704). Then, the stage when the data-hold of the SOS data 160 should be reported to the carrier of the self-electronic money card 10 based on electronic money card ID of the self-electronic money card 10 is calculated (Step 2705), and the information period of the calculated result is stored in the timer T6 (Step 2706). And it becomes an end, i.e., a phenomenon waiting state.

[0173]As a result of a check at Step 2703, if it has already held, it will become an end, i.e., a phenomenon waiting state, without doing anything.

[0174]When the SOS stop instruction broadcasting data 150 from the artificial satellite 25 shown in drawing 18 is received, next, the (step 2702), It confirms whether hold the SOS data 160 of the electronic money card 10 of the same ID as electronic money card ID152 in received data (Step 2707). If it holds as a result of this check, the data of the SOS data 160 concerned currently held will be discarded (Step 2708). To the display device of the self-electronic money card 10, then, the display of the meaning of "since the data of other self-electronic money cards 10 is held at the self-electronic money card 10, please send by an O year O moon O day using the urgent accepting device 23", That is, in under SOS report advice, it confirms whether to be what (Step 2709) and this SOS report advice depend on the SOS data 160 of the electronic money card 10 of electronic money card ID162 in received data (Step 2710). If that is right, SOS report advice will be stopped (Step 2711) and it will become an end, i.e., a phenomenon waiting state.

[0175]It becomes an end, i.e., a phenomenon waiting state, without [the result of a check at Step 2707, otherwise,] doing anything.

[0176]After discarding the data of the SOS data 160 in Step 2708 currently held, When the report of the data of the SOS data 160 is not made by the appointed term, (Step 2712), Without notice [the] confirms whether to be without notice [of the electronic money card 10 of the same ID as electronic money card ID152 of the SOS stop instruction broadcasting data 150 which received now] (Step 2713). As a result of this check, if that is right, a 2nd-class dealings stall will be canceled (Step 2714), and it will be considered as a 3rd-class dealings stall (Step 2715). Then, "main power supply OFF directions" is performed and it branches to operation at the time of main power supply (Step 2716) OFF.

[0177]It becomes a result of a check at Step 2713, otherwise, an end, i.e., a phenomenon waiting state.

[0178] Next, when the phenomenon of timeout is detected, as it is shown in the detail flowchart of (Step 2100) and drawing 28, the phenomenon analyzes further which timeout phenomenon it is.

[0179]Timeout of the timer T1 according [the result of this analysis] to ** shock in a timeout phenomenon (Step 2801), ** Timeout of the timers T2 from the counter part 21, such as a non-inquiry (Step 2802), ** Timeout of timer T3 without functional resumption connection (Step 2803), ** Timeout of the timer T4 under SOS dispatch (Step 2804), ** It is divided like timer T6 timeout (Step 2806) of timeout (Step 2805) **SOS report advice day arrival of the timer T5 after an SOS stop, and timeout (Step 2807) of the timer T7 of **SOS report advice expiration.

[0180]Henceforth, it explains individually for every timeout phenomenon of this.

[0181]In timeout of the timer T1 by a shock, it is made into (Step 2801) and a 3rd-class dealings stall (Step 2808). And the existence check spontaneous outgoing data 60 shown in drawing 12 is sent (Step 2809). Then, the timer T1 is set (Step 2810) and it becomes an end, i.e., a phenomenon waiting state.

[0182]In timeout of the timers T2 from the counter part 21, such as a non-inquiry, it is made into (Step 2802) and a 3rd-class dealings stall (Step 2811). And the existence check spontaneous outgoing data 60 shown in drawing 12 is sent (Step 2812). Then, the timer T2 is set (Step 2813) and it becomes an end, i.e., a phenomenon waiting state.

[0183]In timeout of timer T3 without functional resumption connection, it is made into (Step 2803) and a 3rd-class dealings stall (Step 2814). And the existence check spontaneous outgoing data 60 shown in drawing 12 is sent (Step 2815). Then, the timer T2 is set (Step 2816) and it becomes an end, i.e., a phenomenon waiting state.

[0184]In timeout of the timer T4 under SOS dispatch, it is made into (Step 2804) and a 1st-class dealings stall (Step 2817). And the SOS data 160 shown in drawing 19 is sent (Step 2818). Then, the timer T4 is set (Step 2819) and it becomes an end, i.e., a phenomenon

waiting state.

[0185]In timeout of the timer T5 after an SOS stop, it is made into (Step 2805) and a 1st-class dealings stall (Step 2820). And the existence check spontaneous outgoing data 60 shown in drawing 12 is sent (Step 2821). Then, the timer T2 is set (Step 2822) and it becomes an end, i.e., a phenomenon waiting state.

[0186]In timer T6 timeout of SOS report advice day arrival, (Step 2806), It carries out to the display device of the self-electronic money card 10 (Step 2823), the display of a meaning, i.e., SOS report advice, of "since the data of other self-electronic money cards 10 is held at the self-electronic money card 10, please send by an O year O moon O day using the urgent accepting device 23" Then, a report expiration date is computed based on self-electronic money card ID, it is set as the timer T7 (Step 2824), and it becomes an end, i.e., a phenomenon waiting state.

[0187]In timeout of the timer T7 of SOS report advice expiration, it is made into (Step 2807) and a 2nd-class dealings stall (Step 2825). And the display device of the self-electronic money card 10 "although the data of other self-electronic money cards 10 was held at the self-electronic money card 10, since a report was not carried out within the term by an O year O moon O day, this electronic money card 10 was made into the 2nd-class dealings stall. The meaning of please send as soon as possible using the urgent accepting device 4" is indicated (Step 2826), i.e., SOS report expiration and report advice And it becomes an end, i.e., a phenomenon waiting state.

[0188]Next, the common processing which processes by being called from each processing of the electronic money card 10 is explained using the flow chart of drawing 30 and drawing 31.

[0189]When it is called from each processing of the electronic money card 10 and performs common processing, it is analyzed whether the state of the electronic money card 10 is in what kind of state, or what kind of transaction request it is. By this common processing, as a result of this analysis, the state of a [** / 1st class] dealings stall (Step 3001), ** the state (Step 3002) of a 2nd-class dealings stall, the state (Step 3003) of a [** / 3rd class] dealings stall, the dealings demand (Step 3004) with the ** urgent accepting device 23, and ** -- in addition to this (Step 3005) -- ** -- it is divided like.

[0190]Henceforth, it explains individually for every state of this.

[0191]In the case of the state of a 1st-class dealings stall, to the display device of (Step 3001) and this electronic money card 10 First, the display of the meaning of "please bring this electronic money card 10 to a nearby financial institution", That is, bringing advice to the financial institution 26 is carried out (Step 30060), and "main power supply OFF directions" is performed that a main power supply should be turned off (Step 3007).

[0192]Next, in the case of the state of a 2nd-class dealings stall, it confirms whether to be the dealings demand with (Step 3002) and the urgent accepting device 23 (Step 3008). If it is the dealings demand with the urgent accepting device 23, a session with the urgent accepting device 23 will be established (Step 3009), If all the SOS data which the electronic money card 10 concerned is holding is transmitted to the urgent accepting device 23 (Step 3010) and it finishes transmitting, a session with the urgent accepting device 23 will be released (Step 3011). Next, all the SOS data under maintenance is discarded (Step 3012), a 2nd-class dealings stall is canceled (Step 3013), and it is considered as a 3rd-class dealings stall (Step 3014). And "main power supply OFF directions" is performed that a main power supply should be turned off (Step 3015).

[0193]In the check of being the dealings demand with the urgent accepting device 23 in Step 3008, when it is not the dealings demand with the urgent accepting device 23, the data of other self-electronic money cards 10 is held at the display device of the self-electronic money card 10 at the "self-electronic money card 10, but. O Since a report was not carried out within

the term by a year O moon O day, this electronic money card 10 serves as a 2nd-class dealings stall. The meaning of please send as soon as possible using the urgent accepting device 23" is indicated (Step 3016)., i.e., SOS report expiration and report advice And a return is carried out to call origin.

[0194]Next, in the case of the state of a 3rd-class dealings stall, the input of (Step 3003) and a password is required (Step 3017). And it confirms whether the entered password is a regular password (Step 3018), when it is a regular password, a 3rd-class dealings stall is canceled (Step 3022), and a return is carried out to call origin.

[0195]However, when the entered password is not a regular password, the continuously mistaken number of times is counted and it is confirmed whether this count reached the regular number of times (Step 3019). When the number of times of a continuous error has reached the number of times of regulation as a result of the check, it is considered as a 1st-class dealings stall (Step 3020). And "main power supply OFF directions" is performed that a main power supply should be turned off.

[0196]When the number of times of a continuous error has not reached the number of times of regulation as a result of the check at Step 3019, it returns to Step 3018 that a password should be required again.

[0197]In the dealings demand with the urgent accepting device 23, next, the (step 3004), If a session with the urgent accepting device 23 is established (Step 3023), all the SOS data which the electronic money card 10 concerned is holding is transmitted to the urgent accepting device 23 (Step 3024) and it finishes transmitting, a session with the urgent accepting device 23 will be released (Step 3025). Next, all the SOS data under maintenance is discarded (Step 3026), and "main power supply OFF directions" is performed that a main power supply should be turned off (Step 3027).

[0198]In the case of others, it confirms whether to be (Step 3005) and "main power supply ON operation" (Step 3028), and if that is right, it branches to "Step 3017 of password demand", and if that is not right, a return will be carried out to call origin.

[0199]The above is operation about the loss theft preventive function of the electronic money card 10.

[0200]Drawing 32 - drawing 34 are flow charts which show operation of the counter part 21. Hereafter, operation of the counter part 21 is explained below.

[0201]The power supply of the counter part 21 is one power supply, and is always an ON state fundamentally.

[0202]In operation of the counter part 21, it is standing by in the phenomenon waiting state, and when this waiting state is canceled, operation is started. And an OFF division of which phenomenon occurred is performed. Reception of as opposed to ** power turn (Step 3201) and ** inquiry by this OFF division of an existence Acknowledgement (Step 3202), ** Reception of the electronic money card's 10 existence check spontaneous outgoing data 60 (Step 3203), ** The occurring phenomenon of demand [of the stall from a user] (Step 3204), demand [of the stall release from ** user] (Step 3205), demand [of the war readiness release from ** user] (Step 3206), ** timeout (Steps 3207-3211), and ** power OFF ** becomes clear.

[0203]Henceforth, it explains individually for every occurring phenomenon of this.

[0204]First, when one [a power supply], the data of the existence check inquiry 40 shown in (Step 3201) and drawing 9 is transmitted to the electronic money card 10 (Step 3212). Then, the timer T10 is set (Step 3213) and it becomes an end, i.e., a phenomenon waiting state.

[0205]Next, in the reception of the existence Acknowledgement data 50 to the inquiry shown in drawing 10, it confirms whether to be (Step 3202) and war readiness (Step 3124). If it is war readiness, the meaning of "receiving the response to an existence check inquiry" will be displayed for the report of the response data 50 reception to an existence check inquiry on the

display device of the counter part 21 (Step 3215). This display is not cared about as a numeric code, when the display surface product of a display device is small. When a display device cannot be provided, a sound, the number of times of vibration, etc. may report. Then, the timer T11 is set (Step 3216) and it becomes an end, i.e., a phenomenon waiting state.

[0206]If it is not war readiness, the timer T9 will be set, and the timer T10 will be reset (Step 3217), and it will become an end, i.e., a phenomenon waiting state.

[0207]In reception of the electronic money card's 1 shown in drawing 12 existence check spontaneous outgoing data 60, next, the (step 3203), The timer T9 and the timer T10 are reset (Step 3218), the meaning of "spontaneous dispatch existence check reception" displays on the display device of the counter part 21 (Step 3219), and the existence check inquiry data 40 shown in drawing 9 below is transmitted to the electronic money card 10 (Step 3220). And in order to decide which timer is set, it confirms whether to be war readiness (Step 3221).

[0208]If it is war readiness, the timer T11 will be set (Step 3222) and it will become an end, i.e., a phenomenon waiting state.

[0209]If it is not war readiness, the timer T10 will be set (Step 3223) and it will become an end, i.e., a phenomenon waiting state.

[0210]Next, in the demand of the stall from a user, (Step 3204) and the stall data 70 shown in drawing 13 are transmitted to the electronic money card 10 (Step 3224). And timer T3 is set by making into T3 time to the resumption which the user set up (Step 3225), the timer T9 and the timer T10 are reset (Step 3226), and it becomes an end, i.e., a phenomenon waiting state.

[0211]next, the case of a demand of the stall release from a user -- (Step 3205) -- it confirms whether to be under [stall] ***** just to make sure (Step 3227). If it is during a stall, the functional resumption data 180 shown in drawing 21 will be transmitted to the electronic money card 10 (Step 3228). Then, the timer T8 is set (Step 3229) and it becomes an end, i.e., a phenomenon waiting state.

[0212]If it is not during a stall, it will become an end, i.e., a phenomenon waiting state, without doing anything.

[0213]Next, in the demand of the war readiness release from a user, (Step 3206) and war readiness are canceled (Step 3230), and it becomes an end, i.e., a phenomenon waiting state, after that.

[0214]In timeout, there are five kinds, T3, T8, T9, T10, and T11.

[0215]** Timeout of timer T3 which tells that time to complete the time of a stall and resume a function came (Step 3207), ** The timeout of the timer T8 which tells that the response was not able to be received from the electronic money card 10 to within a time [regular] after functional resumption connection (Step 3208), ** As opposed to the timeout (Step 3209) of the timer T9 which tells that the time which asks an existence check to the electronic money card 10 came, and an inquiry of the existence check to the ** electronic money card 10, It is under [timeout / which tells that the response was not able to be received from the electronic money card 10 to within a time / regular / of the timer T10 / (Step 3210) and ** war readiness] setting, It is classified like the timeout (Step 3211) of the timer T11 which tells that the time which asks an existence check to the electronic money card 10 came.

[0216]Henceforth, it explains individually for this the timeout of every.

[0217]First, the time of a stall is completed and, in timeout of timer T3 which tells that time to resume a function came, (Step 3207) and the functional resumption data 150 shown in drawing 21 are transmitted to the electronic money card 10 (Step 3231). Then, the timer T8 is set (Step 3232) and it becomes an end, i.e., a phenomenon waiting state.

[0218]In the timeout of the timer T8 which tells that the response was not able to be received from the electronic money card 10 to within a time [regular] after functional resumption connection, next, the (step 3208), The meaning of "having no response to the functional resumption connection from the electronic money card 10" is displayed on the display device

of the counter part 21 (Step 3233), and it is considered as war readiness (Step 3234). Then, it becomes an end, i.e., a phenomenon waiting state.

[0219]Next, in the timeout of the timer T9 which tells that the time which asks an existence check to the electronic money card 10 came, (Step 3209) and the existence check inquiry data 40 shown in drawing 9 are transmitted to the electronic money card 10 (Step 3235). Then, the timer T10 is set (Step 3236) and it becomes an end, i.e., a phenomenon waiting state.

[0220]In the timeout of the timer T10 which tells that it was not able to receive from the electronic money card 10 to within a time [of regulation of the response], to an inquiry of the existence check to the electronic money card 10 Next, the (step 3210), The meaning of "having the electronic money card 10 to no response to an inquiry of an existence check" is displayed on the display device of the counter part 21 (Step 3237), and it is considered as war readiness (Step 3238). Then, it becomes an end, i.e., a phenomenon waiting state.

[0221]In the timeout of the timer T11 which tells that the time which asks an existence check to the electronic money card 10 into war readiness came, (Step 3211) and the existence check inquiry data 40 shown in drawing 9 are transmitted to the electronic money card 10 (Step 3239). Then, the timer T11 is set (Step 3240) and it becomes an end, i.e., a phenomenon waiting state.

[0222]In the case of power OFF, it ends at the last, without doing anything.

[0223]Drawing 35 is a flow chart about operation of the urgent accepting device 23.

Operation of the urgent accepting device 23 is explained below using drawing 35.

[0224]In operation of the urgent accepting device 23, it is always in the state of the waiting for reception of a call signal. And when a call signal is received, an OFF division of the call from which apparatus is performed, ** it is directly based on insertion to the urgent accepting device 23 of the call (Step 3501) from telephone, and the ** urgent part 22 -- it calls (Step 3501) and is kicked by OFF, without the call (Step 3503) from the ** electronic money card 10.

[0225]Henceforth, it explains individually for this the call of every.

[0226]First, in the case of the call from telephone, a session is established between (Step 3501) and telephone (Step 3504), and if data is received (Step 3505) and it finishes receiving from telephone, a session with telephone will be released (Step 3506). Received data have two kinds such as loss theft electronic money card ID which is loss robbery report data, and SOS of loss theft electronic money card 10 dispatch.

[0227]After releasing the session between telephones, the loss theft center 24 is called (Step 3507). A session will be released, if a session is established between the loss theft centers 24 (Step 3508), the data received from telephone is transmitted to the loss theft center 24 (Step 3509) and it finishes transmitting (Step 3510). Then, it will be in the reception waiting state of an end, i.e., a call signal.

[0228]In the case of the call by the direct insertion to the urgent accepting device 23 of the urgent part 22, (Step 3501), 1 or all electronic money card ID that are registered are displayed on the display device of the urgent accepting device 23 at the urgent part 22, and one electronic money card ID sent as the electronic money card 10 with a loss theft is determined (Step 3511). Then, operation after Step 3507 which discharged the urgent part 22 (Step 3512) and mentioned above determined electronic money card ID as send data is performed.

[0229]In the case of the call from the electronic money card 10, next, the (step 3503), A session is established between the electronic money cards 10 concerned (Step 3513), and if data is received (Step 3514) and it finishes receiving from the electronic money card 10, a session with the electronic money card 11 will be released (Step 3515). Then, operation after Step 3507 which mentioned above the data received from the electronic money card 10 as send data is performed.

[0230]Drawing 36 and drawing 37 are flow charts which show operation of the loss theft

center 24. Operation of the loss theft center 24 is explained below using drawing 36 and drawing 37.

[0231]In operation of the loss theft center 24, it is always in the state of the waiting for reception of the call signal from the urgent accepting device 23. And if a session is established between (Step 3601) and the urgent accepting device 23 (Step 3602), data is received from the urgent accepting device 23 (Step 3603) and it finishes receiving when a call signal is received, a session with the urgent accepting device 23 will be released (Step 3604). Then, when it is electronic money card ID (Step 3605), the classification, i.e., ** received data, of the received data, each operation in case ** received data are SOS data (Step 3606) is performed.

[0232]Henceforth, it explains individually for this the operation of every.

[0233]First, since it is a loss robbery report when received data are electronic money card ID (Step 3605), it is confirmed whether electronic money card ID where the report is made or which had the report in the loss theft database is registered (Step 3607). When not registering with a loss theft database, it is confirmed whether electronic money card ID where this incident was solved or which had the report in the solution database is registered (Step 3608). Only when not registering with both a loss theft database and a solution database, electronic money card ID which had the report in the loss theft database is registered (Step 3609). And it progresses to Step 3610.

[0234]When it does not register with a loss theft database and registers with the solution database, since this incident is solved, it becomes an end, i.e., the call signal reception waiting state from the urgent accepting device 23.

[0235]Since it means having already received the loss robbery report of this electronic money card ID when the check in Step 3607 registers with the loss theft database, it becomes an end, i.e., the call signal reception waiting state from the urgent accepting device 23, without doing anything.

[0236]When received data are the SOS data 160 shown in drawing 19, in the case of the report of the SOS data 120, next, the (step 3606), It is confirmed whether electronic money card ID162 in the SOS data 160 which had the report whether the report is carried out and now is registered into the loss theft database (Step 3611). When registering with the loss theft database, The information on electronic money card ID162 relation in the SOS data 160 with a report is deleted from a loss theft database (Step 3612), and the information on electronic money card ID162 relation in the SOS data 160 with a report is registered into a solution database (Step 3613). And it progresses to Step 3610.

[0237]When it becomes clear that it does not register with a loss theft database with the check of Step 3611, it is confirmed whether the information on electronic money card ID162 relation in the SOS data 160 which had the report further is registered into the solution database (Step 3614). When not registering with a solution database, the information on electronic money card ID162 relation in the SOS data 160 with a report is registered into a solution database (Step 3615), and it progresses to Step 3610.

[0238]While the carrier of the electronic money card 10 which sent the SOS data 160 with a report has not noticed the loss theft of the electronic money card 10 concerned, the electronic money card 10 concerned sends the SOS data 160, and the electronic money card 10 which received this sends this case. However, there cannot be this [no]. Because, it is because there is a report of a loss theft, SOS data dispatch directions are taken out from the artificial satellite 25 and SOS data is sent only by this. However, it is the fail-safe treatment for a sense.

[0239]Since the SOS data 160 concerned is a meaning which the report is already made when it becomes clear that it registers with the solution database as a result of a check at Step 3614, it becomes an end, i.e., the call signal reception waiting state from the urgent accepting

device 23, without doing anything.

[0240]Next, operation of the loss theft center 24 after Step 3610 is explained.

[0241]First, a session is established between the artificial satellites 25 (Step 3610). When it is ** loss robbery report, there are two kinds in the case of being a report of **SOS120 of subsequent operations.

[0242]Henceforth, it explains individually for this the operation of every.

[0243]First, when it is a loss robbery report, in order to make the SOS data 160 send to the electronic money card 10 of electronic money card ID with (Step 3616) and a report, The SOS dispatch indicative data 80 shown in drawing 15 is transmitted to the artificial satellite 25 (Step 3617), and the session between the artificial satellites 25 is released after that (Step 3618). Next, a session is established among the issue financial institutions 26 of the electronic money card 10 of electronic money card ID with a report (Step 3619), If the loss theft of the electronic money card 10 of electronic money card ID with a report is connected (Step 3620) and it finishes connecting, the session between the issue financial institutions 26 will be released (Step 3621), and it becomes an end, i.e., the call signal reception waiting state from the urgent accepting device 23, after that.

[0244]Next, when it is a report of SOS120, in order to make the electronic money card 10 of electronic money card ID with (Step 3622) and a report stop dispatch of the SOS data 160, The SOS stop instruction data 100 shown in drawing 17 is transmitted to the artificial satellite 25 (Step 3623), and the session between the artificial satellites 25 is released after that (Step 3624). Next, a session is established among the issue financial institutions 26 of the electronic money card 10 of electronic money card ID with a report (Step 3625), The electronic money and the other data which the electronic money card 10 of electronic money card ID with a loss theft held are transmitted to the issue financial institution 26 (Step 3626), If it finishes transmitting, the session between the issue financial institutions 26 will be released (Step 3627), and it becomes an end, i.e., the call signal reception waiting state from the urgent accepting device 23, after that.

[0245]Drawing 38 is a flow chart which shows operation of the artificial satellite 25.

[0246]In operation of the artificial satellite 25, it is standing by in the phenomenon waiting state, and when this waiting state is canceled, operation is started. And an OFF division of which phenomenon occurred is performed. By this OFF division, the occurring phenomenon of timeout (Step 3802-3803) of the call (Step 3801) from ** loss theft center 24 and ** timer becomes clear.

[0247]Henceforth, it explains individually for every occurring phenomenon of this.

[0248]In the case of the call from the loss theft center 24, first, the (step 3801), A session is established between the loss theft centers 24 (Step 3804), and if data is received (Step 3805) and it finishes receiving from the loss theft center 24, a session with the loss theft center 24 will be released (Step 3806). Then, the data received from the loss theft center 24 confirms whether to be the SOS dispatch indicative data 80 shown in drawing 15 (Step 3807). If it is the SOS dispatch indicative data 80, the SOS dispatch directions broadcasting data 90 shown in drawing 16 will be broadcast (Step 3808). Then, the timer T12 is set (Step 3809) and it will be in the state waiting for a call from the end 24, i.e., a loss theft center.

[0249]When the received data is not the SOS dispatch indicative data 80 as a result of a check at Step 3807 (i.e., when it is the SOS stop instruction data 100 shown in drawing 17), the SOS stop instruction broadcasting 110 shown in drawing 11 is broadcast (Step 3810). Then, the timer T13 is set (Step 3811) and it will be in the state waiting for a call from the end 24, i.e., a loss theft center.

[0250]Next, timeout is classified, without the timeout for broadcasting **SOS dispatch directions broadcasting data 90, and the timeout for broadcasting **SOS stop instruction broadcasting 150.

[0251]Henceforth, it explains individually for this the timeout of every.

[0252]First, in timeout of the timer T12 for broadcasting the SOS dispatch directions broadcasting data 90, the (Step 3802) SOS dispatch directions broadcasting data 90 is broadcast (Step 3812). Then, the timer T12 is set (Step 3813) and it will be in the state waiting for a call from the end 24, i.e., a loss theft center.

[0253]Next, in timeout of the timer T13 for broadcasting the SOS stop instruction broadcasting data 150, the (Step 3803) SOS stop instruction broadcasting data 150 is broadcast (Step 3814). Then, the timer T13 is set (Step 3815) and it will be in the state waiting for a call from the end 24, i.e., a loss theft center.

[0254]Idle time, such as a base station of a PHS telephone network or a vertical-retrace-line period of a television signal, is used, and it may be made to perform SOS dispatch directions etc. instead of using the artificial satellite 25.

[0255] [Effect of the Invention]According to this invention, the electronized currency stored by the electronic money dealings machine or electronic money dealings machine which suited loss and a theft, and other data are easily recoverable so that clearly from the above explanation.

[0256]Loss by mislaying after the fall from the body of an electronic money dealings machine or use can be prevented.

[0257]it goes through a prescribed period -- the input of the password which is alike, suspends the function of an electronic money dealings machine, and is changed for between [every] homonymy scheduled time -- the stall of an electronic money dealings machine -- it may cancel -- it can accumulate and the safety of an electronic money dealings machine can be improved now.

[Brief Description of the Drawings]

[Drawing 1]It is a system configuration figure showing an embodiment of the invention.

[Drawing 2]It is a figure showing the operation-sides side composition of an electronic money dealings machine.

[Drawing 3]It is a block diagram showing the internal configuration of an electronic money dealings machine.

[Drawing 4]It is a figure showing the outline of processing in the case of trading between an electronic money dealings machine and POS.

[Drawing 5]It is a system configuration figure showing the composition of the principal part of a loss theft preventive function.

[Drawing 6]It is a functional block which shows the composition of a counter part.

[Drawing 7]It is a figure showing Example 1 of an effective password for 24 hours.

[Drawing 8]It is a figure showing Example 2 of an effective password for 24 hours.

[Drawing 9]It is a block diagram of existence check inquiry data (counter part -> electronic money card).

[Drawing 10]It is a block diagram of the existence Acknowledgement data (electronic money card -> counter part) based on an inquiry.

[Drawing 11]It is a block diagram of functional resumption data (counter part -> electronic money card).

[Drawing 12]It is a block diagram of the existence check spontaneous outgoing data (electronic money card -> counter part) based on an inquiry.

[Drawing 13]It is a block diagram of stall data (counter part -> electronic money card).

[Drawing 14]It is an explanatory view showing the contents of the dealings stall.

[Drawing 15]It is a block diagram of SOS dispatch indicative data (loss theft center -> artificial satellite).

[Drawing 16]It is a block diagram of SOS dispatch directions broadcasting data (artificial

satellite -> electronic money card).

[Drawing 17]It is a block diagram of SOS stop instruction data (loss theft center -> artificial satellite).

[Drawing 18]It is a block diagram of SOS stop instruction and SOS abandonment indicative data (artificial satellite -> electronic money card).

[Drawing 19]It is a block diagram of SOS data (electronic money card -> electronic money card).

[Drawing 20]It is a block diagram showing the data content of an urgent part.

[Drawing 21]It is a flow chart which shows the basic motion in connection with loss theft prevention of an electronic money card.

[Drawing 22]It is a flow chart which shows processing of transactions with an urgent accepting device.

[Drawing 23]It is a flow chart which shows another opportunity / self-inside-of-a-plane processing of transactions.

[Drawing 24]It is a flow chart which shows the processing corresponding to shock detection.

[Drawing 25]It is a flow chart which shows the processing at the time of self-card ID reception.

[Drawing 26]It is a flow chart which shows a continuation of drawing 25.

[Drawing 27]It is a flow chart which shows the processing at the time of other card ID reception.

[Drawing 28]It is a flow chart which shows time out treatment.

[Drawing 29]It is a flow chart which shows a continuation of drawing 28.

[Drawing 30]It is a flow chart which shows common processing.

[Drawing 31]It is a flow chart which shows a continuation of drawing 30.

[Drawing 32]It is a flow chart which shows operation of a counter part.

[Drawing 33]It is a flow chart which shows a continuation of drawing 32.

[Drawing 34]It is a flow chart which shows a continuation of drawing 33.

[Drawing 35]It is a flow chart which shows operation of an urgent accepting device.

[Drawing 36]It is a flow chart which shows operation of a loss theft center.

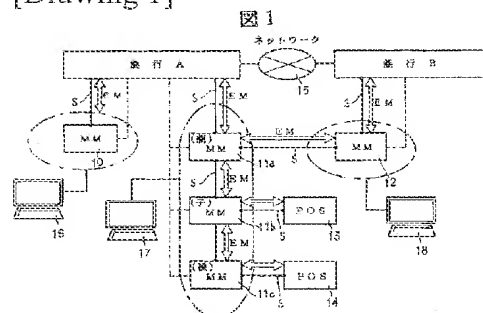
[Drawing 37]It is a flow chart which shows a continuation of drawing 36.

[Drawing 38]It is a flow chart which shows operation of an artificial satellite.

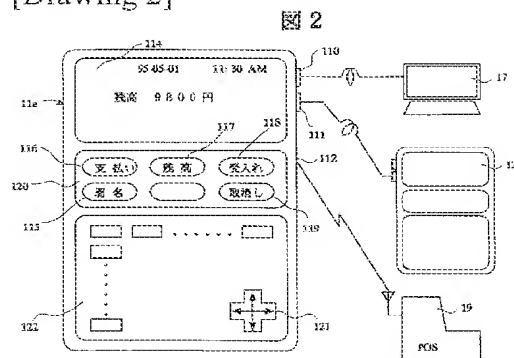
[Explanations of letters or numerals]

10, 11a-11c, 12 [-- A transmitter-receiver, 146 / -- GPS 21 / -- A counter part, 22 / -- An urgent part, 23 / -- An urgent accepting device, 24 / -- A loss theft center, 25 / -- Artificial satellite.] -- An electronic money dealings machine, 13, 14 -- A POS terminal, 15 -- A network, 143,144,145

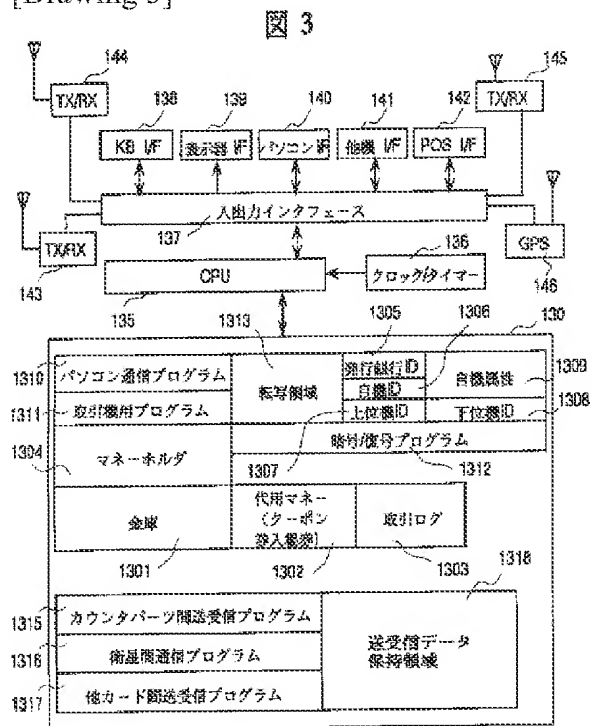
[Drawing 1]



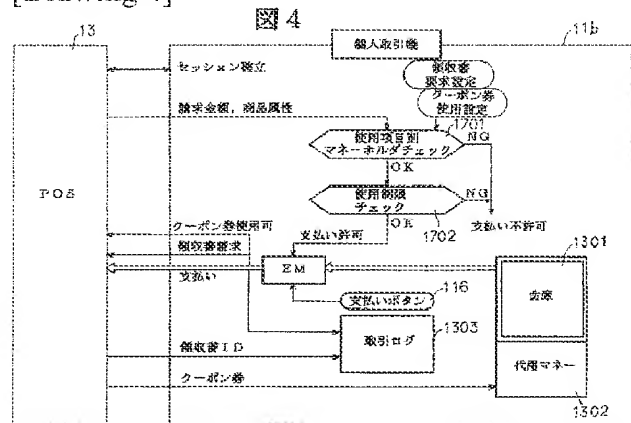
[Drawing 2]



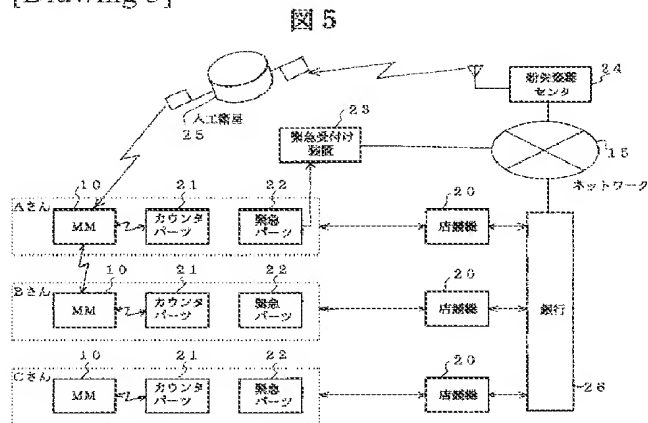
[Drawing 3]



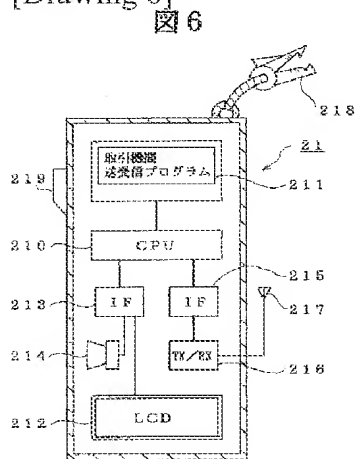
[Drawing 4]



[Drawing 5]



[Drawing 6]



[Drawing 7]

図 7

24時間有効パスワード例1

真偽混合パスワード	曜日	パスワード入力数	
		真(パスワードは任意)	偽(パスワードは任意)
Pt1	日	1	3
:	月	2	2
Pen	火	3	1
Pf1	水	4	0
:	木	3	1
:	金	2	2
Pfe	土	1	3

Pt1~Pin: 真パスワード
Pf1~Pfe: 偽パスワード

[Drawing 8]

図 8

2.4 有効パスワード例2

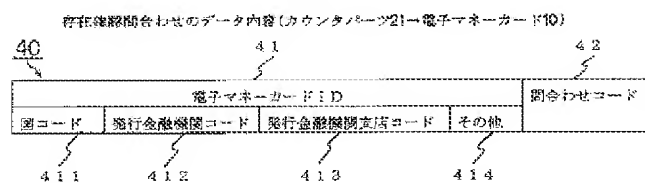
真偽照合パスワード	9にも 下1桁	パスワード入力数	
		真(パスワードは任意)	偽(パスワードは任意)
Pw1	0	6	0
:	1	4	1
:	2	3	2
:	3	2	2
Pw2	4	1	4
Pw3	5	5	0
:	6	4	1
:	7	3	2
:	8	2	3
Pw4	9	1	4

Pw1~Pw4: 真パスワード

Pw1~Pw4: 偽パスワード

[Drawing 9]

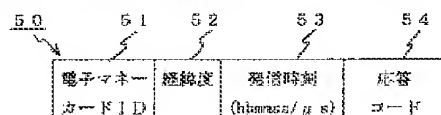
図 9



[Drawing 10]

図 10

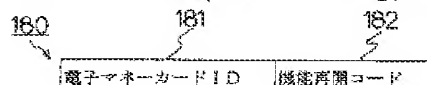
存在確認照合のデータ内容(電子マネーカード10→カウンタパーツ21)



[Drawing 11]

図 11

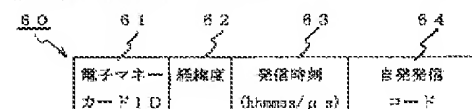
機能再開のデータ内容(カウンタパーツ21→電子マネーカード10)



[Drawing 12]

図 12

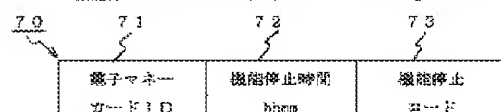
存在確認自発発信のデータ内容(電子マネーカード10→カウンタパーツ21)



[Drawing 13]

図 13

機能停止のデータ内容(カウンタパーツ21→電子マネーカード10)



[Drawing 14]

図 14

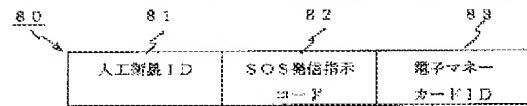
取引機能停止の内容

取引内容	第1期	第2期	第3期
開店受付時顧客との取引	○	○	○
店舗用取引装置との取引 (緊急受け付け機の代付)	×	○	○
パスワード入力	×	×	○

[Drawing 15]

図 15

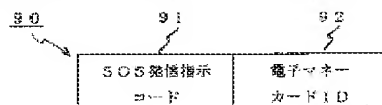
SOS発信指示のデータ内容(紛失盗難センタ24→人工衛星25)



[Drawing 16]

図 16

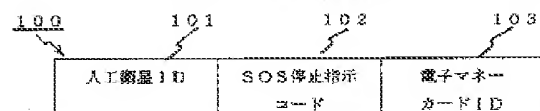
SOS発信指示ブロードキャストのデータ内容(人工衛星25→電子マネーカード10)



[Drawing 17]

図 17

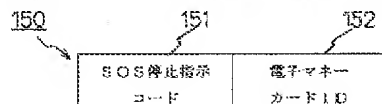
SOS停止指示のデータ内容(紛失盗難センタ24→人工衛星25)



[Drawing 18]

図 18

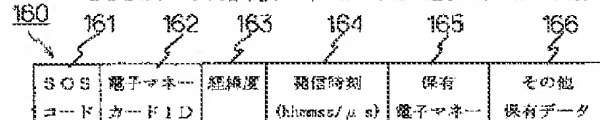
SOS停止指示ブロードキャストのデータ内容(人工衛星25→電子マネーカード10)



[Drawing 19]

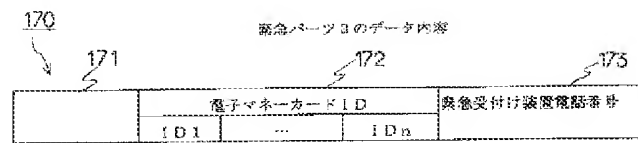
図 19

SOSのデータ内容(電子マネーカード10→電子マネーカード10)



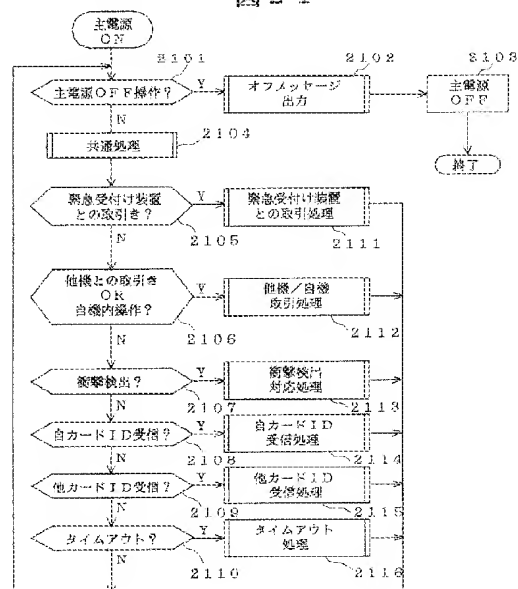
[Drawing 20]

図 2 0



[Drawing 21]

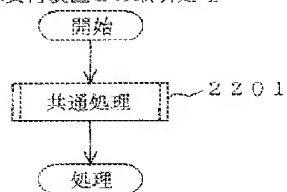
図 2 1



[Drawing 22]

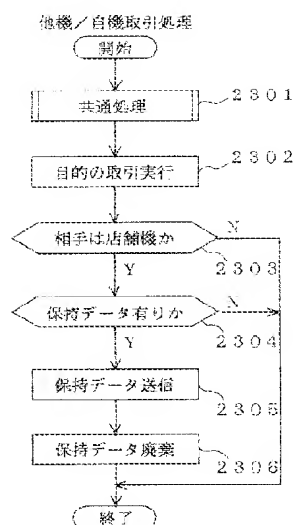
図 2 2

緊急受付装置との取引処理



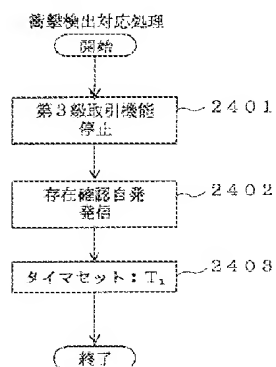
[Drawing 23]

図 2 3



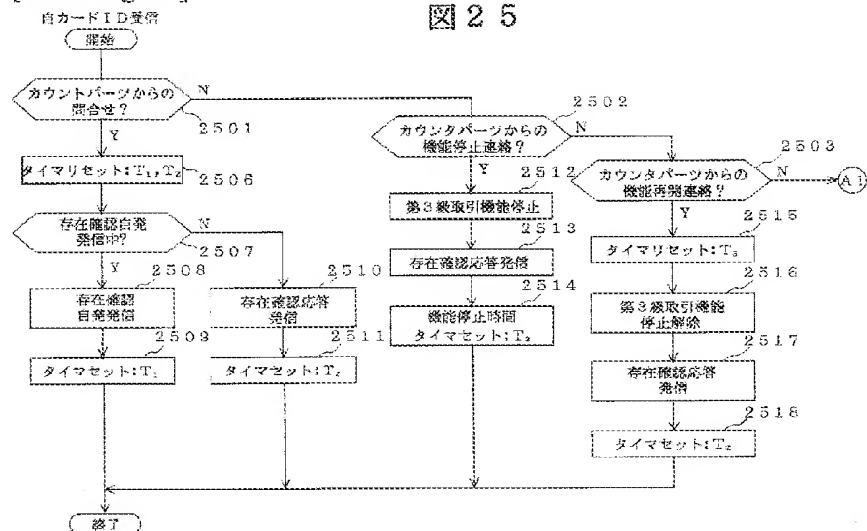
[Drawing 24]

図 2 4



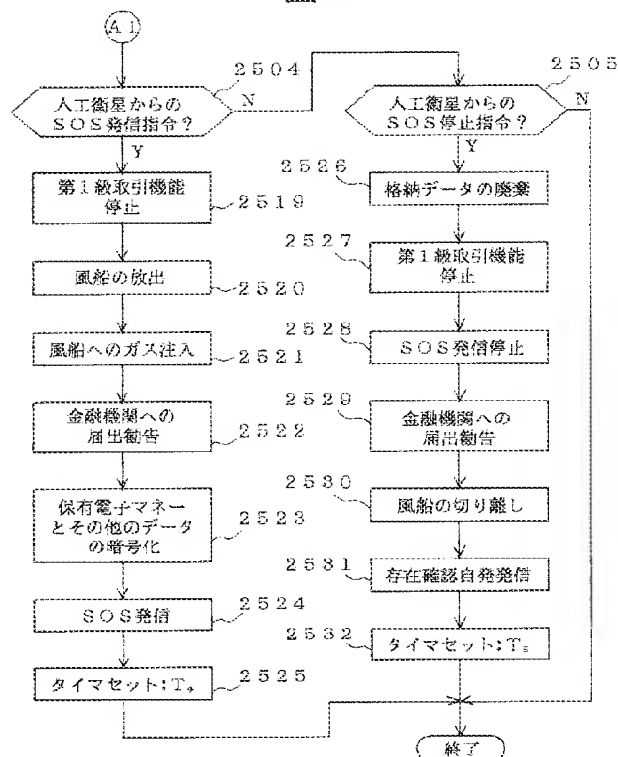
[Drawing 25]

図 2 5



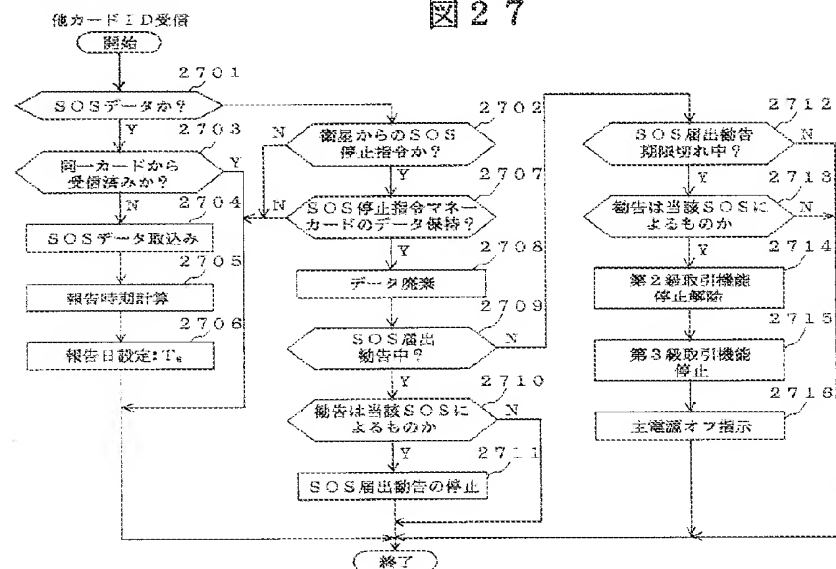
[Drawing 26]

図 26



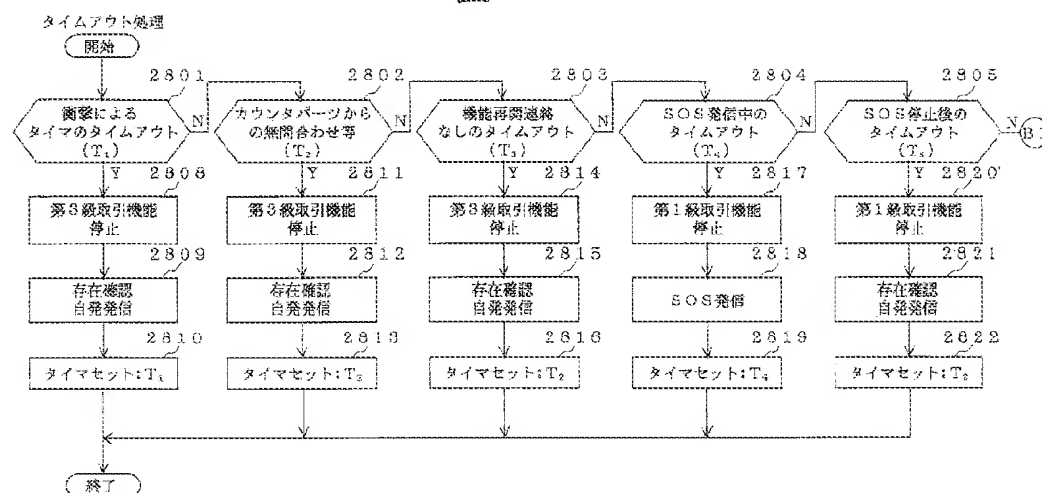
[Drawing 27]

図 27



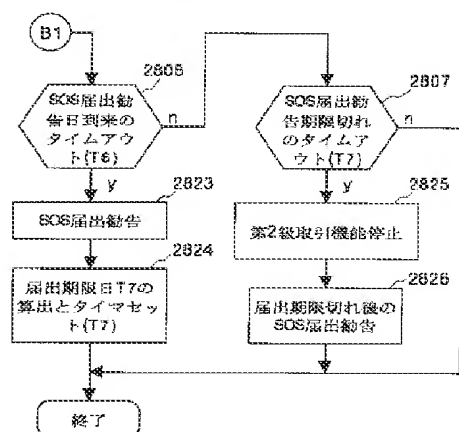
[Drawing 28]

図 28



[Drawing 29]

図 29



[Drawing 30]

図 30

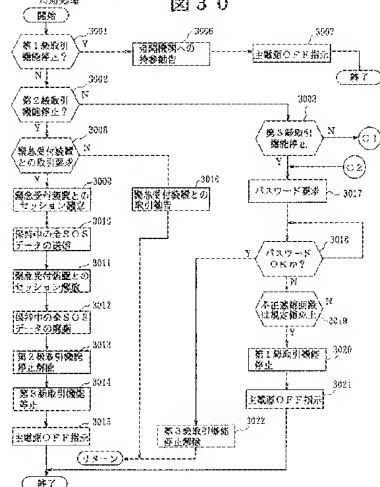
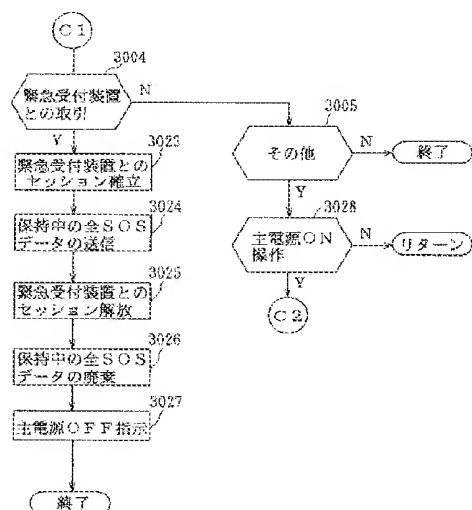
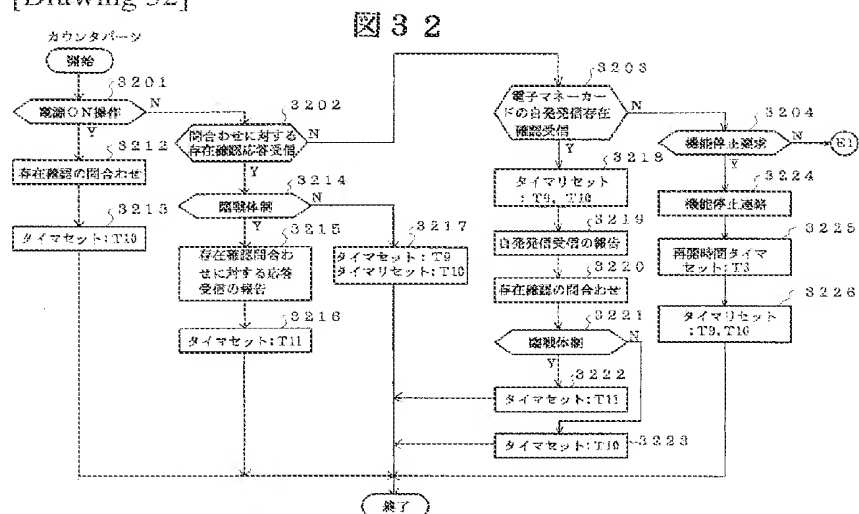


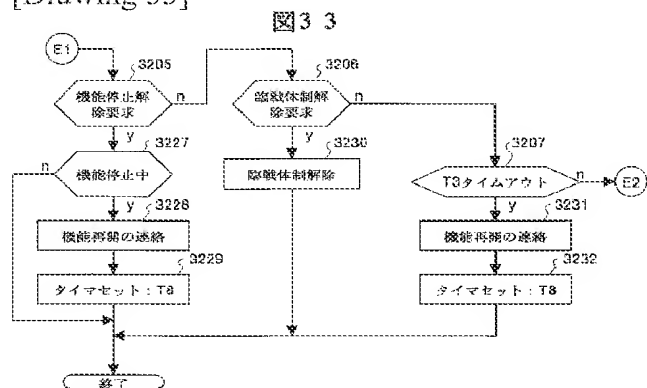
图 3-1



[Drawing 32]

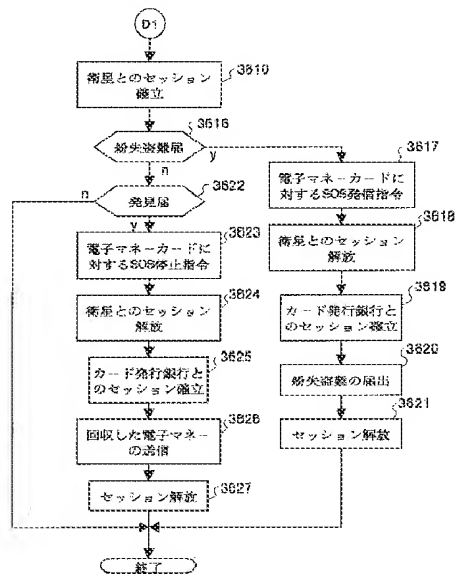


[Drawing 33]



[Drawing 37]

図37



[Drawing 38]

図38

